PATENT APPLICATION
Attorney Docket: 54391

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Applicant:	Ward
Serial No.:	09/655,987
Filed:	9/6/2000
For:	Composition for Protecting Work Surfaces from Contamination
Group Art Unit:	1774
Examiner:	Tamra L. Dicus

BRIEF FOR APPELLANT

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

This is an appeal from the decision of the Primary Examiner dated 6/2/03, finally rejecting Claims 1-8, 19-28 in the above-identified patent application.

I. REAL PARTY IN INTEREST

The real party in interest is Calvin B. Ward

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to appellant, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

III. STATUS OF THE CLAIMS

Claims 1-8, 19-28 are currently pending in the above-identified patent application, the remaining claims have been withdrawn in response to a restriction requirement. In the Office Action dated 6/2/03, the Examiner rejected Claims 1-8, 19-28 and indicated that the Action was final.

IV. STATUS OF AMENDMENTS

No amendments have been filed after the above-described final rejection.

V. SUMMARY OF THE INVENTION

Refer to Figure 1 and the discussion thereof that begins at line 4 of page 3 of the specification. The present invention is a protective sheet 10 for covering a surface. Sheet 10 is constructed from an electrostatically charged sheet 11 having a top and bottom surface and an absorbent layer 12. The absorbent layer has top and bottom surfaces, the bottom surface of the absorbent layer being bonded to the top surface of the electrostatically charged sheet. The absorbent layer is divided into a plurality of cells 14 for containing liquid spilled on the absorbent layer. The absorbent layer can be constructed from paper, open cell foam, a fibrous mat, or any other absorbent material. In one preferred embodiment, the cells are constructed by providing hydrophobic barriers 13 in the absorbent layer. The barriers can be constructed from paraffin, plastic, or any other material that can penetrate the absorbent layer. Referring to Figure 2, a hydrophobic layer 21 is bonded to the top surface of the absorbent layer. The hydrophobic layer has a plurality of pores 22 that allow liquid spilled on the hydrophobic layer to penetrate the hydrophobic layer and be absorbed by the absorbent layer.

VI. ISSUES

A. Are Claims 1-2, 19-20, and 27-28 anticipated under 35 U.S.C. 102(b) by USPN 4,312,907 to Hiraoka, *et al* (hereafter "Hiraoka").

B. Are Claims 1, 2, 5, 19, 27, 28, 20 and 23 anticipated under 35 U.S.C. 102(b) as being anticipated by Babb, *et al* (hereafter "Babb").

C. Are Claims 1-8 and 19-28 unpatentable under 35 U.S.C. 103(a) over USPN 4,797,310 to Barby, *et al* (hereafter "Barby") in view of USPN 4,312,907 to Hiraoka, *et al*, and USPN 3,709,221 to Riely.

VII. GROUPING OF CLAIMS

A. With reference to the rejections under 35 U.S.C. 102 with respect to Hiraoka, the claims are to be considered in three groups. The first group consists of Claims 19 and 27. The second group consists of Claims 2 and 20. The third group consists of Claims 1 and 28.

B. With reference to the rejections under 35 U.S.C. 102 with respect to Babb, the claims are to be considered in two groups. The first group consists of Claims 19-20, 23, and 27. The second group consists of Claims 1, 2, 5, and 28.

C. With reference to the rejections under 35 U.S.C. 103, the claims are to be considered in four groups. The first group consists of Claims 1, 2, 5, 7, 8, 19, 20, 23, and 25-28. The second group consists of Claims 3 and 21. The third group consists of Claims 4 and 22. The fourth group consists of Claims 6 and 24.

VIII. ARGUMENT

A. The Examiner's Burden under 35 U.S.C. 102

The Examiner has the burden of showing by reference to the cited art each claim limitation in the reference. Anticipation under 35 U.S.C. 102 requires that each element of the claim in issue be found either expressly or inherently in a single prior art reference. In re King, 231 USPQ 136, 138 (Fed. Cir. 1986); Kalman v. Kimberly-Clark Corp., 218 USPQ 781, 789 (Fed. Cir. 1983). The mere fact that a certain thing may result from a given set of circumstances is not sufficient to sustain a rejection for anticipation. *Ex parte Skinner*, 2 USPQ2d 1788, 1789 (BdPatApp&Int 1986). Under the doctrine of inherency, if an element is not expressly disclosed in a prior art reference, the reference will still be deemed to anticipate a subsequent claim if the missing element "is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Cont'l Can Co. v. Monsanto Co., 948 F.2d 1264,

1268, 20 USPQ2d 1746, 1749(Fed. Cir. 1991). "Inherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." Trintec Indus., Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295, 63 USPQ2d 1597, 1599(Fed. Cir. 2002) (quoting In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)). "When the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference" (*In re* Rijckaert, 28 USPQ2d, 1955, 1957).

B. Rejection of Claims 1, 2, 19-20, 27, and 28

1. Rejection of Claim 19 and 27

Claim 19 and the claims dependent therefrom require an electrostatically charged sheet that is bonded to an absorbent layer. Applicant submits that Hiraoka does not teach such an electrostatically charged sheet. Hiraoka teaches an absorbent layer bonded to a water-impermeable layer that includes pores having particles that prevent water drops from forming.

In making this rejection, the Examiner stated that Hiraoka teaches a water-impermeable sheet material comprised of a fiber sheet substrate having a water impermeable layer attached thereto. According to the Examiner, Hiraoka teaches that the water impermeable layer has pores that can be formed by electrical discharge, and hence, the layer is electrostatically charged. According to the Examiner, subjecting a layer to an electrostatic charge is functionally equivalent to electrostatically charging the layer. Applicant must disagree.

First, Hiraoka teaches that the pores can be formed by an electrical discharge pore forming operation. There is no further teaching in Hiraoka with respect to the details of that operation. The Examiner presumes that such a process involves placing an electric field across a layer and causing a discharge to pass through the layer. However, this is purely speculation on the Examiner's part. Furthermore, the Examiner has not pointed to any teaching that such a method leaves the layer in question electrostatically charged. For example, it is well known that pores can be generated in plastic sheets by forming an ion path through discharge or charged particle bombardment and then etching the sheet in question in an appropriate solution that

preferentially removes the material along the discharge path. Such methods form pores using a discharge but does not leave the layer electrostatically charged, as any charge remaining from the discharge operation is removed in the subsequent etching operation.

To electrostatically charge a layer, one must deposit a net charge on or in the layer. Even if one were to assume that the method taught in Hiroaka involves merely treating the layer by passing a spark through the layer, one cannot determine if the porous layer so formed is left with an electrostatic charge. A spark passing through a layer creates a hole in the layer by heating or displacing the material along the path of the spark. Whether or not a net electrical charge is left on the layer depends on the conditions under which the spark passes through the layer. Since Hiraoka is silent with respect to the conditions under which the holes are formed, one cannot determine if a net charge is left on the layer.

Even if one limits the discharge methods mentioned in Hiraoka to methods in which a spark is passed through the layer, the Examiner still has not met his burden. Since Hiraoka does not teach that the layer in question is electrostatically charged, the Examiner must be arguing that it is inherent that a sheet through which a spark passes becomes electrostatically charged. To prevail with such an argument, the Examiner must show that the layer always becomes charged when a spark passes through it. The Examiner's argument rests on the assumption that any time a material is subjected to an electrical discharge the material becomes electrostatically charged. Applicant respectfully disagrees. The mere fact that a spark passes through a sheet of material does not necessarily imply that a net charge is left on the sheet of material. In fact, if the material is in contact with a grounded electrode while the sparks jump from another electrode and pass through the layer and terminate on the grounded electrode, any deposited surface charge on the sheet will be discharged by the grounded electrode. Hence, it is not necessarily true that subjecting the layer of Hiraoka to a discharge results in the layer becoming electrostatically charged.

Furthermore, Hiraoka teaches that after the pores are formed, a liquid containing a mixture of the particles of the water drop-preventing agent with a hydrophobic polymeric

material is coated on, or impregnated in, the water-impermeable layer (Column 6, lines 37-48). Hence, for the composition taught in Hiraoka to meet the limitations of Claim 19 with respect to an electrostatically charged sheet, the spark process must impart an electrostatic charge to the layer and that charge must remain after the surface is coated with the above described solution. The Examiner has not pointed to any teaching in the art or the references that supports such a finding.

Accordingly, Applicant submits that the Examiner has not met the Examiner's burden of proof for anticipation with reference to Claim 19 and the claims dependent therefrom.

2. Rejection of Claims 2 and 20

In addition to the limitations of Claim 19, Claims 2 and 20 require that the absorbent layer comprises paper. The Examiner maintains that Hiraoka teaches that the fiber sheet taught therein may comprise a cellulosic material, and hence, paper. The Examiner points to col. 4, lines 1-10 of Hiraoka for support of this proposition.

Applicant must disagree with the Examiner's reading of Hiraoka. The cited passage refers to the composition of the particles of the water drop-preventing agent taught in Hiraoka. These are the particles that are bound in the pores of the water-insoluble layer. This is not the water absorbing layer identified by the Examiner. Accordingly, there are additional grounds for allowing Claims 2 and 20.

3. Rejection of Claims 1 and 28

Claims 1 and 28 impose the further restriction that the absorbent layer is divided into a plurality of cells for containing liquid. The new oxford dictionary defines a cell as "a small compartment in a larger structure such as a honeycomb". The same dictionary defines a compartment as "a section of a container in which certain items can be kept separate from others".

The Examiner maintains that Hiraoka teaches that the absorbent sheet is divided into cells. The Examiner bases this argument on the fact that Hiraoka teaches an absorbent sheet that

is nonwoven and has absorptive properties. The Examiner has not pointed to any teaching of cells in this nonwoven and absorptive sheet. Accordingly, the Examiner must again be arguing that such a sheet inherently contains cells. A fibrous mat is a nonwoven sheet that has absorptive properties; however, such a mat does not contain sections that can be kept separate from one another. Hence, even the nonwoven sheet identified by the Examiner does not inherently contain cells. Accordingly, there are additional grounds for allowing Claims 1 and 28

C. Rejection of Claims 1, 2, 5, 19, 27, 28, 20 and 23 as being anticipated under 35 U.S.C. 102(b) by Babb.

1. Rejection of Claims 19-20, 23, and 27

Babb teaches laminates having at least two layers, one of which is a polymer having perfluorocyclobutane rings and the other of which can be a porous layer. To sustain a rejection under 35 U.S.C. 102, the Examiner must at a minimum show that the polymer layer is electrostatically charged.

In making this rejection, the Examiner looks to a teaching that the adhesion characteristics of the substrate for polymer deposition thereon may be enhanced by surface treatment such as corona discharge methods. In addition, the Examiner looks to a teaching that the polymer can be applied using electrostatic spraying. The Examiner has not pointed to any teaching in Babb that either of these processes leave the polymer layer in an electrostatically charged condition. Hence, the Examiner must be arguing that these processes inherently leave the resulting surface charged.

First, the reference to surface treatment using corona discharge and other methods refers to treating the surface on which the polymer is to be applied. Corona discharge treatment of surfaces alters the surface chemistry of the surface. While corona discharge can leave a surface charge on a surface, such treatments are also used to remove surface charges. Hence, the effect of such treatments cannot be determined without further details. Furthermore, the mere fact that a surface that is to receive a polymer is treated in a manner that charges the surface does not require that the polymer layer that is deposited on that surface is electrostatically charged after

the deposition of the polymer. Hence, the Examiner has not shown that such treatments necessarily lead to an electrostatically charged polymer layer.

Similarly, the Examiner has not pointed to any teaching that a polymer layer applied by electrostatic spraying is necessarily an electrostatically charged layer. Electrostatic spraying techniques utilize charged droplets that are propelled using electric fields at the surface being sprayed. The Examiner has not pointed to any teaching that the charge on the droplets is trapped in the polymer layer and remains there after the layer is cured. Hence, the Examiner has not shown that such treatments necessarily lead to an electrostatically charged polymer layer. Accordingly, Applicant submits that the Examiner's rejection of Claims 19 and the claims dependent therefrom under 35 U.S.C. 102 in view of Babb should not be sustained.

2. Rejection of Claims 1, 2, 5, and 28

In addition to the limitations relating to an electrostatically charged sheet discussed above, these claims require that the absorbent layer is divided into a plurality of cells for containing liquid within the boundaries of said cells. The Examiner has not pointed to any explicit teaching in Babb that the layer bonded to the polymer layer contains such cells. In fact, there is no mention of an absorbent layer having cells of any kind in Babb.

The Examiner attempts to overcome this missing teaching by arguing that Babb teaches a nonwoven sheet that absorbs liquids. Applicant repeats the arguments made above with reference to this contention in the rejection of Claims 1 and 28 as being anticipated by Hiraoka. Hence, Applicant submits that there are additional grounds for allowing Claims 1, 28, and the claims dependent therefrom.

D. Rejection of Claims 1-8 and 19-28 as being unpatentable under 35 U.S.C. 103(a) over Barby, Hiraoka, and Riely.

1. The Examiner's Burden under 35 U.S.C. 103

To sustain a rejection under 35 U.S.C. 103, the Examiner must show that the combined references teach each of the elements of the claim or that there is some motivation in the art for

altering one of the teachings to arrive at the combined set of teachings. "The mere fact that a reference could be modified to produce the patented invention would not make the modification obvious unless it is suggested by the prior art." (*Libbey-Owens-Ford v. BOC Group*, 4 USPQ 2d 1097, 1103). In addition, the Examiner must show that there is some motivation in the art that would cause someone of ordinary skill to combine the references, and that in making the combination, there was a reasonable expectation of success. Where the claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under section 103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success... Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438, 1442(CAFC 1991).

2. Rejection of Claims 1, 2, 5, 7, 8, 19, 20, 23, and 25-28

In making this rejection, the Examiner stated that Barby teaches an article for absorbing liquid or delivering liquid. The Examiner admits that Barby does not teach an electrostatically charged sheet. The Examiner looks to Hiraoka for the teaching of an electrostatically charged sheet.

As pointed out above, Hiraoka does not teach an electrostatically charged sheet. Hiraoka teaches producing pores by passing a spark through a substrate to create a hole through the substrate. There is no mention of an electrostatically charged sheet in any of the references. As noted above, the Examiner has not provided any evidence that passing a spark through a substrate always leads to the substrate being electrostatically charged. In addition, even if such an operation left a charge on the substrate, the charge would have to survive the subsequent bonding and other processing operations to lead to an article satisfying the claims in question. Once again, the Examiner has not pointed to any teaching to that effect.

The Examiner also states that both Hiraoka and the present invention use the "electrostatic sheet" for the same purpose, namely, preventing the condensation of moisture, and hence, there is a motivation for combining the teachings. Applicant must disagree. First, the present invention is used for protecting a surface from liquid spills, not from moisture condensing on the undersurface of sheet. In fact, if one were to use the present invention to protect a surface, there could be no condensation of liquid under the impermeable sheet, because the impermeable sheet would be bound electrostatically to the underlying surface, and hence, no moisture containing air could reach the surface to cause such condensation.

Second, the issue is whether or not one would be led to combine the teachings of Barby and Hiraoka. If anything, the inventions of Barby and Hiraoka are directed to unrelated problems. Barby is concerned with a liquid permeable article for holding a liquid in a form that can be released by pressure. Hiraoka is directed to an article that is water-impermeable and that prevents the condensation of water on the undersurface thereof. Accordingly, Applicant submits that the Examiner has not made a *prima facia* case for obviousness under 35 U.S.C. 103 for Claims 1 and 19 or the claims dependent therefrom.

3. Rejection of Claims 3, and 21

Claims 3 and 21 add the further limitation that the absorptive layer recited in Claims 1 and 19, respectively, comprises an open cell foam. The Examiner admits that Barby does not teach an open cell foam sheet. The Examiner looks to Hermann as teaching an open-cell foam. Hermann teaches a foam substrate that is useful in packaging and dispensing active ingredients that are released by placing the foam under a defined stress. The Examiner maintains that using open-cell foam would provide extra strength to the material, and hence, there is a rationale for combining the teachings of the reference. Applicant must disagree.

First, Barby is directed to a specific class of moisture permeable substrates that hold very large amounts of liquid compared to their weight. It is these unique substrates that provide the advantages claimed in Barby. The Examiner has not pointed to any teaching in Hermann that the

open-cell foam taught therein provides these advantages. Hence, there is no teaching of a material that would satisfy the limitations of the absorbent material in Barby.

Second, the Examiner has not pointed to any suggestion that increasing the strength of the material taught in Barby is of any use, or that an open cell foam would be stronger than the materials already taught in Barby.

Third, the Examiner has not pointed to any teaching in Hermann or Barby that suggests that the foam of Hermann would add extra strength to the invention of Barby. In this regard, the strength of an open cell foam is well known to be a property of the particular foam. Hence, one cannot determine from the cited references whether the foam of Hermann would provide the advantage the Examiner has identified. Accordingly, there are additional grounds for allowing Claims 3 and 21.

4. Rejection of Claims 4 and 22

Claims 4 and 22, further require that the absorptive foam layer is electrostatically charged. The Examiner admits that Barby does not teach charging the absorptive layer. The Examiner looks to Hiraoka for the teaching of an electrostatically charged sheet. As noted above, Hiraoka does not provide such a teaching.

In addition, even if one were to accept the Examiner's argument that Hiraoka teaches an electrostatically charged sheet, the sheet in question does not correspond to the absorptive layer taught in Hiraoka. Hence, even under the Examiner's argument, the combination of references does not teach the elements of Claims 4 and 22, and hence, there are additional grounds for allowing these claims.

5. Rejection of Claims 6 and 24.

These claims add the further limitation that the absorptive layer includes a fibrous mat and that the fibrous mat be electrostatically charged. The Examiner admits that Barby does not teach using a fibrous mat as the absorptive layer. The Examiner also admits that Barby does not

teach that the absorptive layer is electrostatically charged. The Examiner looks to Hiroaka for the teaching of the electrostatic charging and to Riely for the teaching of a porous mat in a surgical dressing. According to the Examiner it would have been obvious to one of ordinary skill in the art to modify the article of Barby to include a fibrous mat since Riely teaches forming a fibrous mat results in a greater absorptivity per volume of absorbent material. The Examiner cites col. 5, line 30 of Riely for this proposition. Applicant repeats the above arguments with respect to the lack of teachings in Hiroaka with respect to electrostatically charging the absorptive layer.

First, the issue is whether the fibrous mat would be expected to provide a greater absorptivity than the material taught in Barby. The Examiner has not pointed to any such teaching in the art or the reference. Absent such greater absorptivity, a skilled person would not be motivated to replace the material taught in Barby with that taught in Riely, as the purpose of the Barby reference is to provide high absorptivity, and Barby maintains that the material taught therein provides superior absorptivity relative to the materials in the art as of 1981.

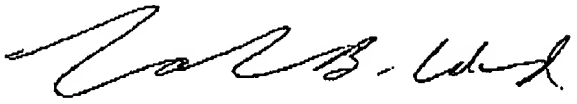
Second, the passage cited by the Examiner refers to a specific mat taught in Riely, which provides more absorptivity than other mats when the mat is to be compressed. Since the Examiner has not shown that this specific mat would be more useful than the absorptive material taught in Barby, the Examiner has failed to show a motivation for making the replacement postulated by the Examiner or that such a replacement would reasonably be expected to be successful based on the Examiner's indicated motivation. Accordingly, there are additional grounds for allowing Claims 6 and 24.

VII. CONCLUSION

Applicant respectfully submits that for the reasons of fact and law argued herein, the decision of the Examiner in finally rejecting Claims 1-8, 19-28 should be reversed.

I hereby certify that this paper (along with any others attached hereto) is being sent via facsimile to 703-872-9311. This document is filed in triplicate.

Respectfully Submitted,



Calvin B. Ward
Registration No. 30,896
Date: Sept 1, 2003

18 Crow Canyon Court, Suite 305
San Ramon, CA 94583
Telephone (925) 855-0413
Telefax (925)855-9214

OFFICIAL

APPENDIX

THE CLAIMS ON APPEAL:

1. A protective covering comprising:

an electrostatically charged sheet having a top and bottom surface; and

an absorbent layer having top and bottom surfaces, said bottom surface of said absorbent layer being bonded to said top surface of said electrostatically charged sheet, said absorbent layer being divided into a plurality of cells for containing liquid within the boundaries of said cells.

2. The protective covering of Claim 1, wherein said absorbent layer comprises paper.

3. The protective covering of Claim 1, wherein said absorbent layer comprises an open cell foam.

4. The protective covering of Claim 3, wherein said foam is electrostatically charged.

5. The protective covering of Claim 1, wherein said absorbent layer comprises a fibrous mat.

6. The protective covering of Claim 5, wherein said fibrous mat is electrostatically charged.

7. The protective covering of Claim 1, wherein said absorbent layer comprises a plurality of hydrophobic barriers, said hydrophobic barriers defining said cells.

8. The protective covering of Claim 1 further comprising a hydrophobic layer bonded to said top surface of said absorbent layer, said hydrophobic layer having a plurality of pores

therethrough, said pores allowing liquid to penetrate said hydrophobic layer and be absorbed by said absorbent layer.

19. A protective covering for protecting an exposed surface:

an electrostatically charged sheet having a top and bottom surface; and

an absorbent layer having top and bottom surfaces, said bottom surface of said absorbent layer being in contact with said top surface of said electrostatically charged sheet.

20. The protective covering of Claim 19, wherein said absorbent layer comprises paper.

21. The protective covering of Claim 19, wherein said absorbent layer comprises an open cell foam.

22. The protective covering of Claim 21, wherein said foam is electrostatically charged.

23. The protective covering of Claim 19, wherein said absorbent layer comprises a fibrous mat.

24. The protective covering of Claim 23, wherein said fibrous mat is electrostatically charged.

25. The protective covering of Claim 19, wherein said absorbent layer comprises a plurality of hydrophobic barriers, said hydrophobic barriers defining said cells.

26. The protective covering of Claim 19 wherein said absorbent layer further comprises a hydrophobic layer bonded to said top surface of said absorbent layer, said hydrophobic layer having a plurality of pores therethrough, said pores allowing liquid to penetrate said hydrophobic layer and be absorbed by said absorbent layer.

27. The protective covering of Claim 19 wherein said electrostatically charged layer is bonded to said absorbent layer.

28. The protective covering of Claim 19 wherein said absorbent layer is divided into a plurality of cells for containing liquid.